NOTES.

By offering Dr. Temple the Bishopric of Exeter, Mr. Gladstone has removed from his post the most eminent schoolmaster in England. Dr. Temple has done much for the education, present and future, of all classes; and although this is not the place to comment on all he has done in this direction, we may note here what he has done for education in Science. He may fairly claim to be the first head-master who has recognised its importance, and effectively introduced it into his school. And its introduction at Rugby is of special importance, because it is the acknowledged leader in educational progress, and because so many head-masters have been trained there. Now Harrow and Eton, and several other schools are doing something, though none yet with quite the same liberality as Rugby: but it will be instructive to look back ten years, and thus to estimate the advance. Rugby was then the only public school where science was taught at all. But even there it was under great disadvantages. No school was assigned to it; it was an extra, and heavily weighted by extra payment. There was no laboratory, scarcely any apparatus, and scarcely any funds for procuring it. About forty to fifty boys attended lectures on it, but there was no possibility of making those lectures consecutive, and of dealing with advanced pupils. Now there is a suite of rooms devoted to science. A large and excellent laboratory, where thirty boys are working at the same time at practical chemistry with the assistance of a laboratory superintendent, opens into a smaller private laboratory, which is for the use of the master and a few advanced students. This again opens into a chemical lecture room, in which from forty to fifty can conveniently sit. The seats are raised, and the lecture table fitted with all that is required. Adjoining is the physical science lecture room, in which sixty can sit, and of which a part is assigned to work tables. And out of this the master's private room is reached, in which apparatus is kept, and experiments and work prepared. There is a considerable geological museum, and an incipient botanical collection. A Natural History Society meets frequently, and publishes reports and papers contributed by the boys. Five masters take part in teaching natural science. It is introduced into the regular school work (about 360 out of 500 appear to be in the Natural Science classes); being compulsory on all the middle school; an alternative in the upper school; and optional in the Sixth Form. And the result of the teaching has been satisfactory. It has not damaged classics. It has been the means of educating many boys, and has been a visible gain to the great majority; and it has steadily contributed to the lists of honours gained at the University. If Dr. Temple had done nothing else, his name would deserve honour at our hand for having brought about this change. Let us hope that his successor will be equally liberal to science, and maintain its efficiency.

The public anxiety about the fate of our great explorer, Dr. Livingstone, has been anything but allayed by the recent telegrams from Bombay and Zanzibar, wanting, as they seem to do at present, the stamp of the approval of Sir R. Murchison. The Bombay mail is now hourly expected; and, by the opening meeting of the Royal Geographical Society, Sir Roderick will be in possession of all the data on which to form a complete estimate of the recent intelligence, and will then communicate the results. In the meantime, we wait and hope; Livingstone is not the man to do his work hastily or incompletely, or to return leaving anything unexplored.

The President of the Royal Society, Sir Edward Sabine, being unable, through pressure of official duty, to accept the Khédive's invitation to be present at the opening of the Suez Canal, was allowed to nominate a gentleman to represent the Royal Society on the memorable occasion. The President's choice, which has been approved by the Council, fell on Mr. J. F. Bateman, C.E. This selection will perhaps gratify the civil engineers as well as the Royal Society, for Mr. Bateman, who is now on his way to Egypt, has made himself known on the Mediterranean, by his land-reclamations in Majorca and at the mouth of the Ebro.

Drs. Carpenter and Wyville Thomson have just concluded a remarkably successful dredging expedition in the surveying ship *Porcupine*, the scientific results of which will shortly be laid before the Royal Society. They succeeded in bringing up large quantities of ooze from a depth of more than 2,400 fathoms, and have established the wonderful facts, that at such enormous depths, in total darkness, and with a temperature below the freezing-point, there is not merely life but life in abundance; not merely the lowest organisms, but highly developed Mollusca, Echinoderms, and Star-fishes. Many practical points of great importance for future investigation have been established during this cruise, more especially the proper mechanical arrangements by which dredging can be carried on in almost all weathers, thus enormously increasing the amount of work that can be performed in a given time; and, what is perhaps of equal value, the discovery by Captain Culver of a far more effectual method than the dredge for obtaining in large numbers many of the characteristic inhabitants of these profound ocean depths. Copious series of thermometric observations have also been taken, which point to results of great theoretical interest.

The "Female Physicians" question, thanks to Professor Masson, has made a great stride during the past week. Ladies are to be admitted to study Medicine at Edinburgh University. Imagine the feelings of the non-contents when Professor Masson, in a final outburst, described their argumentation as "rampageous mysticism, dashed with drivel from Anacreon!"

We are glad to learn that, through the generosity of a friend of science who forbids the mention of his name, the publication of the *Astronomical Journal* is about to be resumed. Dr. Gould will edit it, as before.

The Fellows of the Chemical Society reassemble this evening (Thursday), and begin the work of the session by discussing the President's elaborate paper on the Atomic Theory, which has been printed at length in the Journal of the Society. Any contribution to chemical philosophy from the pen of Professor Williamson must command the attention of those who have studied the history of chemistry, and the discussion he has invoked will doubtless be sustained by able supporters and opponents. Prof. Williamson holds that the atomic theory is the consistent general expression of all the best known and best arranged facts of chemistry, and he challenges detractors to bring forward an alternative theory. He asserts that all chemists use the atomic theory, though many refer to it as something which they would be glad to dispense with; and that all the facts which point so distinctly to the existence of molecules derive their significance from the atomic theory. Even those who cannot accept Dr. Williamson's conclusion that the atomic theory is the very life of chemistry, will doubtless feel duly grateful for his masterly summary of the evidence by which the theory is upheld.

We learn with regret from *Trübner's Literary Record* that the Imperial College of Pekin, which was established to disseminate the knowledge of the West amongst the Celestials, appears to have ended in a failure. Prince Kung favoured it, but other powerful Mandarins, and amongst them Wo-Jen, a leader of the anti-foreign party, have succeeded in extinguishing it. We are afraid that we have here the result of Occidental diplomacy. Has Wo-Jen been tampered with by Lowe-king?

It should make Englishman sad to think that while Mr. Peabody, who we trust is now better, finds the most pressing

© 1869 Nature Publishing Group

call here on his far more than princely munificence, to be the cry of the poor to heaven for bread and fresh air, in his own country, he finds the progress of Science alone needing his fostering aid. We have before us the first annual report of the Trustees of the *Peabody Academy of Science*, giving a full account of the manner in which the gift of 140,000 dollars is to be expended or invested, and of the progress already made in the buildings, natural history collections, museums, and published proceedings, which we trust will worthily carry down the name of Peabody to posterity.

M. Louis Lacaze has bequeathed to the French Academy of Sciences the funds necessary for the foundation of three prizes of 10,000 francs each, to be awarded every second year. The sciences for which these prizes are to be given are Physiology, Physics, and Chemistry.

We understand that Mr. James Young intends founding in Glasgow an institution for the study of Technology, to be opened in the course of the ensuing year.

A French translation of Professor Huxley's Elementary Physiology is announced.

We understand that the appointment of Master of the Mint has not yet been filled up.

Earthquakes seem approaching inconveniently near us. On Sunday night and Monday morning severe shocks were felt at Frankfort, Darmstadt, Wiesbaden, and Mayence; while a succession of shocks on the night of October 2, seems to have been unpleasantly violent, as the following extract from a letter from Coblentz, with which we have been favoured, will show:—"The greatest event we have had lately was an *earthquake!* It was on the night of Saturday, October 2, a little before 12, when most people were in bed, and were startled out of their sleep. I was wide awake, luckily, so came in for the whole; the noise was most alarming, and when my bed shook under me I guessed what it was. People in the town ran into the streets, and there was general alarm, as the shocks were so severe. The worst was about ten miles off, where chimneys fell and some walls cracked, but everywhere the accompanying noise seems to have been very great, like a train running under the house in bumps and jerks. The whole extent of the earthquake was very considerable, and many said they had never felt so bad a one before."

Here are some notes from Oxford:—

On the 28th ult., the Warden and Fellows of Merton College elected Professor Clifton, F.R.S. (as Professor of Experimental Philosophy) to a Fellowship in the College. This is, we believe, only the second time that a college has availed itself of the power given by its new statutes of electing a professor to a fellowship, the person so elected being unconnected with the college in question, either by past or present membership, or by his professorship. Instances have occurred of the election of Professors to Fellowships in the colleges to which their Professorships were attached, but in this case the authorities of Merton College, without the least pressure or solicitation from without, have acted up to their increased powers given them by the last statutes, although the professorship is attached to Wadham College. We hail this piece of news with the greatest pleasure, as it indicates the desire which is now beginning to show itself, to devote the funds represented by fellowships to the purposes of University work, rather than to treat fellowships as simple prizes. The triennial elections of members of Council of the University is an important event at Oxford, as that body has sole power of initiation in University matters. The following were elected as the result of the poll on Thursday last:—The Dean of Christ Church; the Presidents of Trinity and Magdalen; Professors Price, H. Smith, and Scott; Mr. Ince, of Exeter; Mr. Liddon, of Christ Church, and Mr. Fowler, of Lincoln. The deputy appointed by Sir Benjamin Brodie to deliver lectures for him this term is Mr. A. Vernon Harcourt, of Christ Church. There are nineteen "unattached students" among the Freshmen, unattached students being persons who have availed themselves of the recently granted privilege of becoming members of the University, without becoming members of any College. Mr. Lawson, the Professor of Botany and Rural Economy, will give a course of Lectures during the ensuing term on the minute anatomy of plants. They are to be delivered in the Herbarium at the Botanic Gardens every Tuesday and Friday at 8 P.M. Is this hour fixed as the one at which it is most likely that members of the University, interested in Botany, will attend? We well remember when Prof. Lindley lectured at University College, London, to audiences of from eighty to a hundred students at 8 A.M. An election to the Lee's Readership in Anatomy will be holden at Christ Church on Saturday, December 18. Candidates for the office are requested to apply for information to the Dean on or before Saturday, the 13th of November.

And here is a note from Cambridge:—The Rev. T. G. Bonney, B.D., Tutor of St. John's, has been appointed Lecturer in Natural Science at Cambridge; and Mr. Trotter, of Trinity, will lecture on Electricity, Magnetism, and Botany. We understand that these arrangements have been made because the staff of university professors is not large enough to do all the teaching in Natural Science that is required. We congratulate the University on the increased desire for instruction in these subjects; but is the number of men in the University competent to teach them so small that it has been found necessary to entrust Electricity and Botany to the same lecturer?

ASTRONOMY

The Astronomical Congress at Vienna

The German Astronomical Society, although it dates from only one or two years back, is already in earnest work, and this year a Congress, extending over several days, was held at Vienna, at which not only were the president and council elected for the next year, but many papers of astronomical importance were read. Count Marshall has been good enough to send us the following account of the meeting:—The Society numbers actually 209 members, most of them superintendents of German and Extra-German Observatories; about 50 met at Vienna, among whom MM. Struve, of Pulkowa (President), Möller (Sweden), Forster (Berlin), Scheibner (Leipzig), Hersch (Neufchâtel), Lieut.-Gen. Bager (Berlin), Prof. Schaub (Trieste), Prof. Julius Schmidt (Athens), Mr. Schönfeld (Mannheim), were perhaps the most eminent. On Sept. 13, the first day of meeting, M. Struve opened the session with an exposition of the purpose of the Society and the recent progress of astronomy, especially of the knowledge of the physical nature of celestial bodies. Since the last meeting at Bonn, the number of members, the pecuniary resources, and the library have notably increased, and the following publications have been issued: Two years of the Quarterly Periodical, Dr. Auwers's paper on Variable Proper Movements, Dr. Lesser's Tables of Pomona, and Dr. von Asten's new Tables of Reduction for the "Histoire céleste Française." The study of the Asteroids, new Tables of Jupiter and of Comets, especially of the periodical ones, are in active preparation. Prof. Auwers distributed copies of tables for the reduction of positions of fixed stars from 1750 up to 1840, prepared at the Observatory of Pulkowa; and gave an account of his own new reduction of Bradley's observations, undertaken by order of the same Observatory, and of his tour to England for this purpose, during which he found, at Oxford, a number of old and very complete observations of fixed stars. The President referred to his connection with the German North Polar expedition. Prof. Julius Schmidt exhibited and explained a map of the Moon 6 feet in diameter, made at the Observatory of Athens. Prof. Zöllner (of Leipzig) detailed his recent observations of the Sun on the Janssen-Lockyer method.

September 15.—Prof. Bruhns (Leipzig) commemorated the hundredth birthday of A. von Humboldt, and distributed the

© 1869 Nature Publishing Group